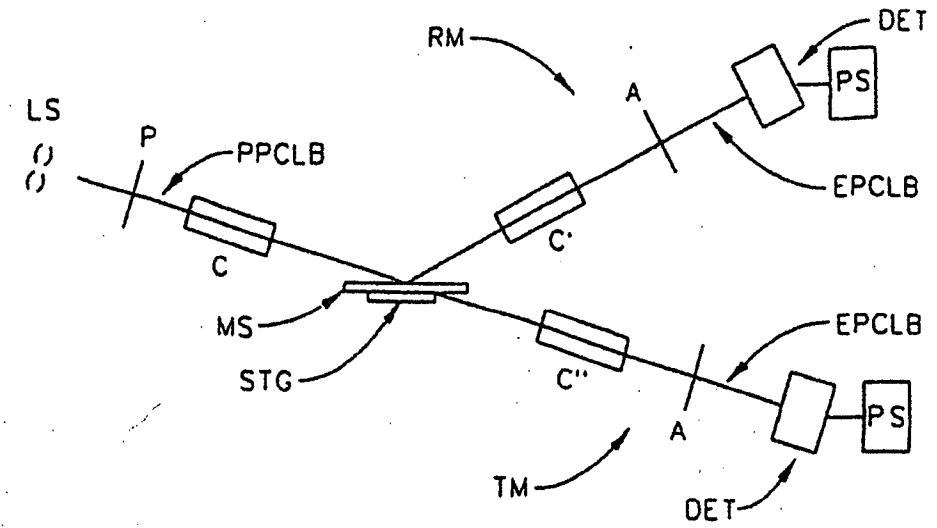


FIG. 1a

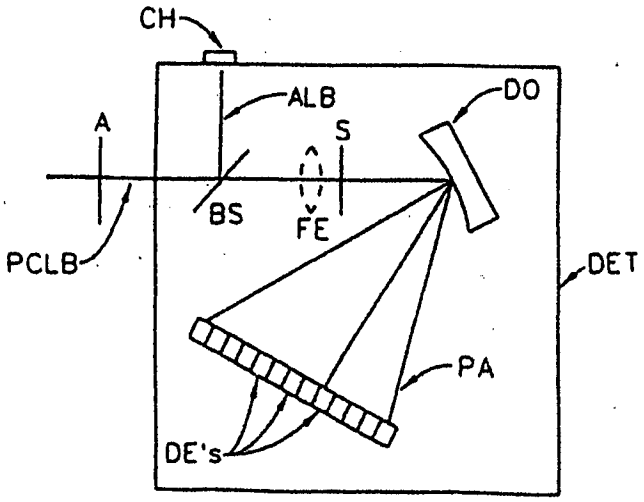


FIG. 2

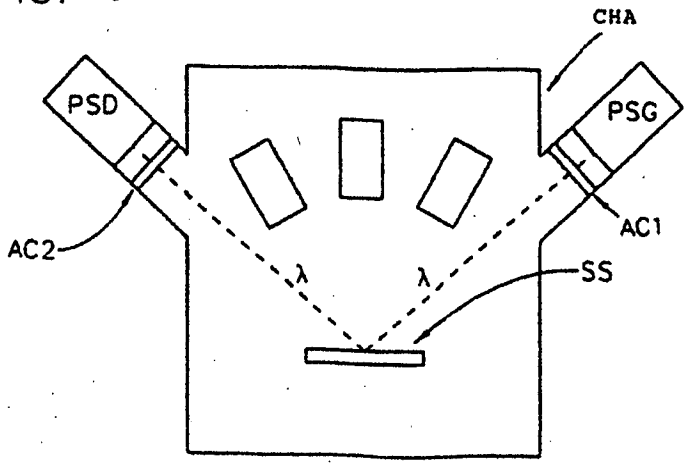


FIG. 1c

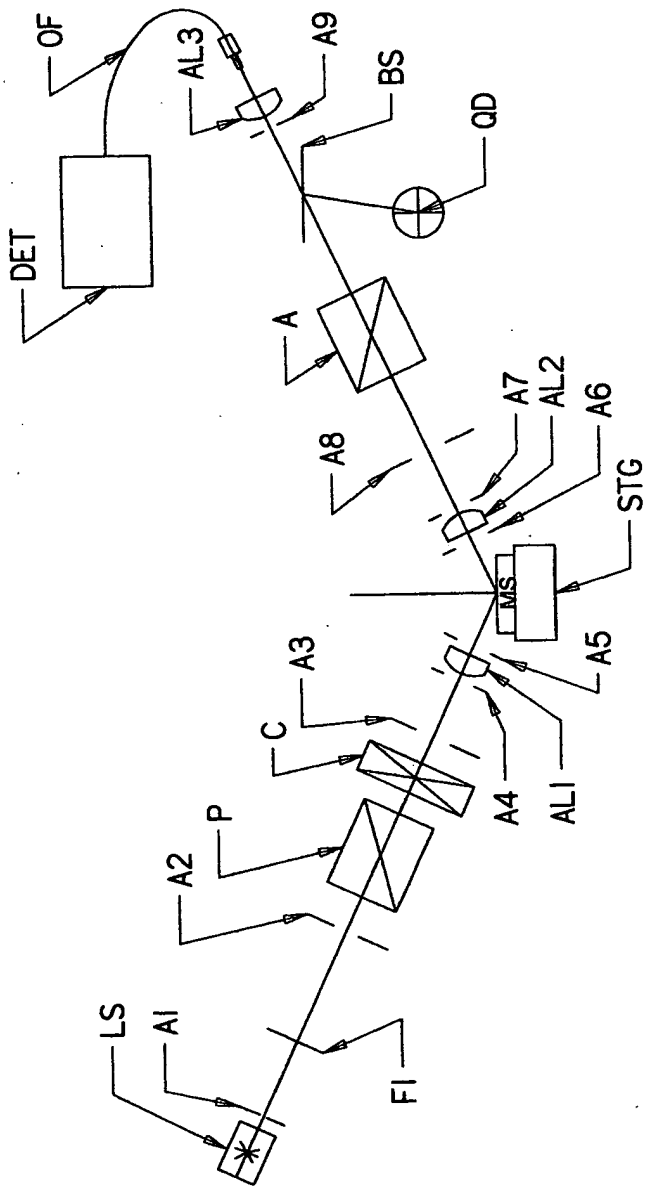


FIG. 1b

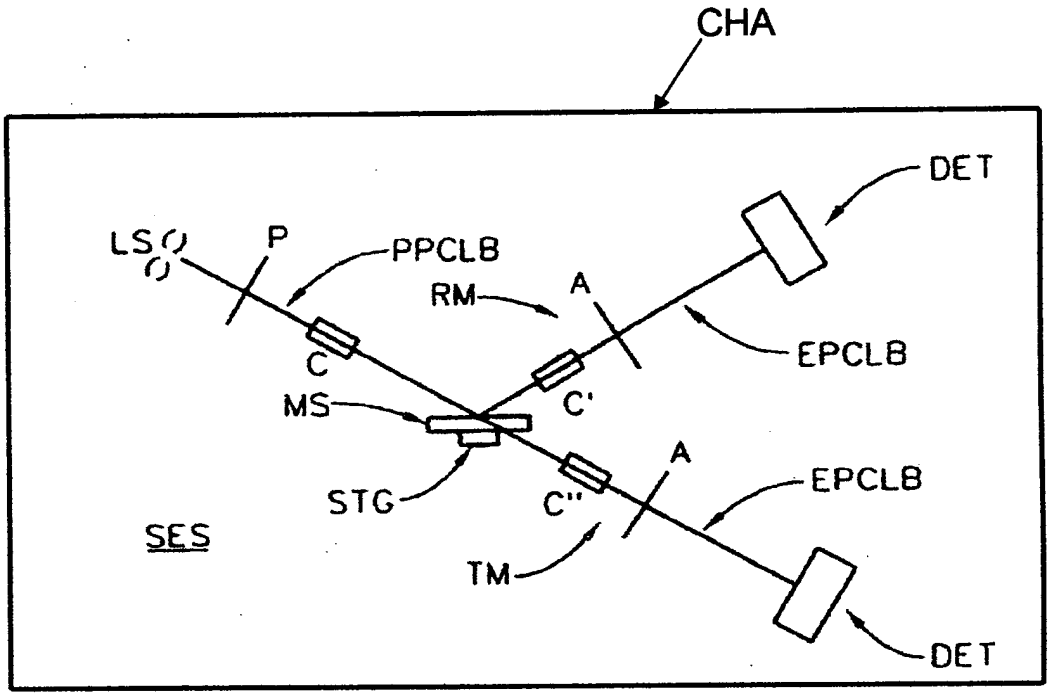


FIG. 1d

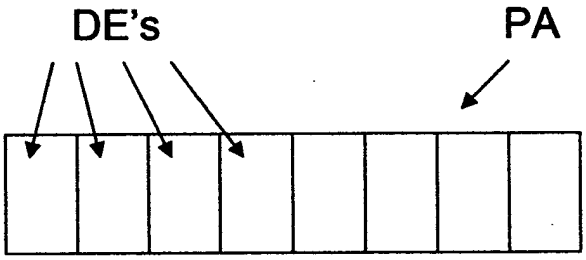


FIG. 1e

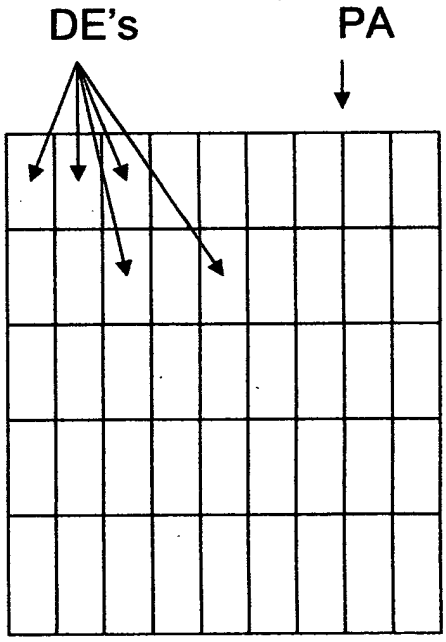


FIG. 1f

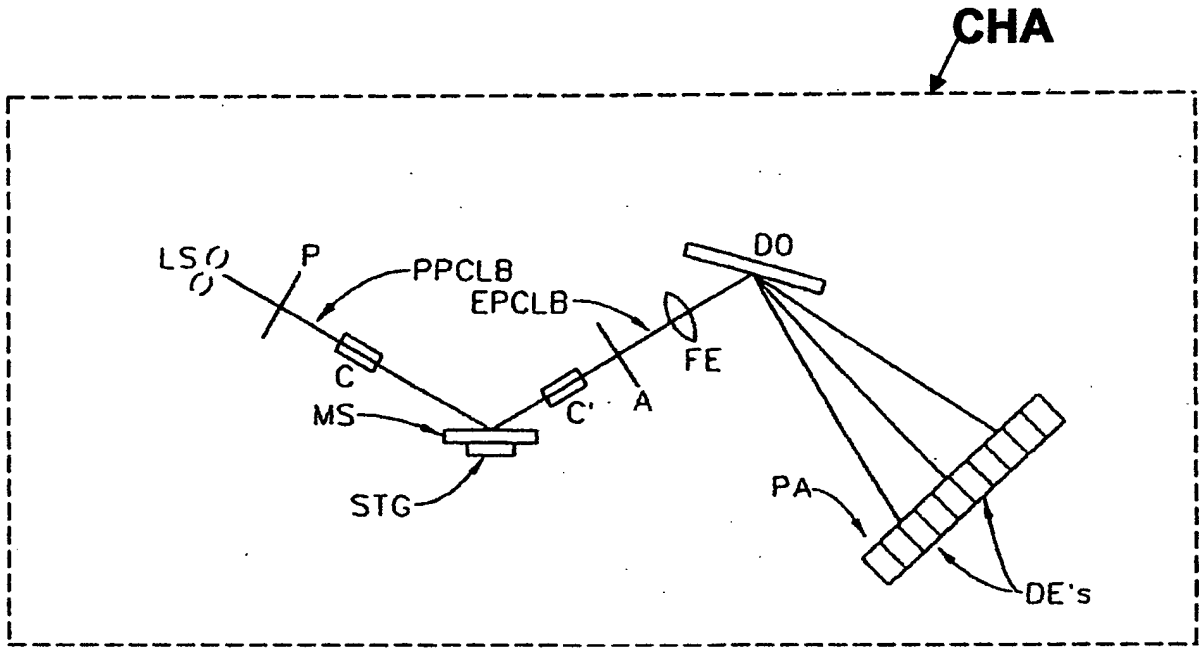

CHA
LSO
P
PPCLB
EPCLB
C
MS
STG
C'
A
FE
DO
PA
DE's

FIG. 3

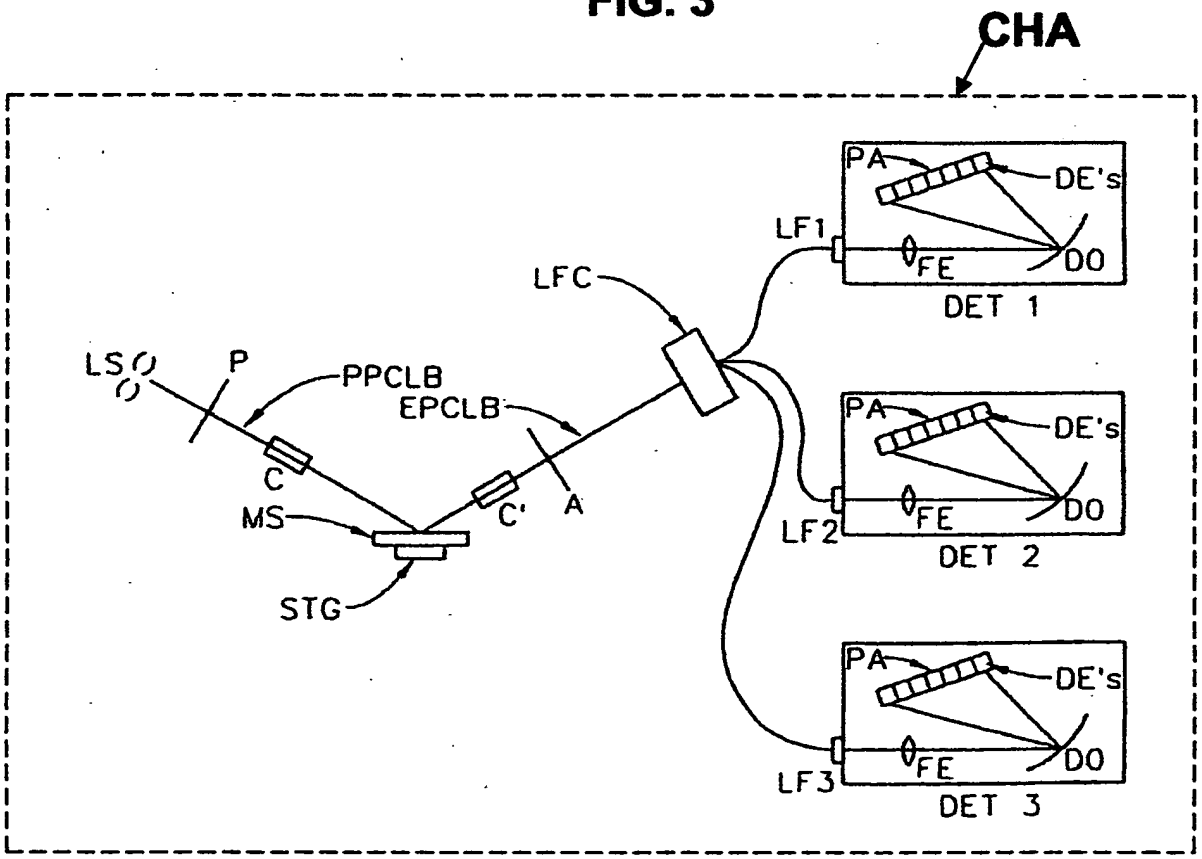

CHA
LSO
P
PPCLB
EPCLB
C
MS
STG
C'
A
LFC
LF1
LF2
LF3
PA
DE's
FE
DO
DET 1
DET 2
DET 3

FIG. 4

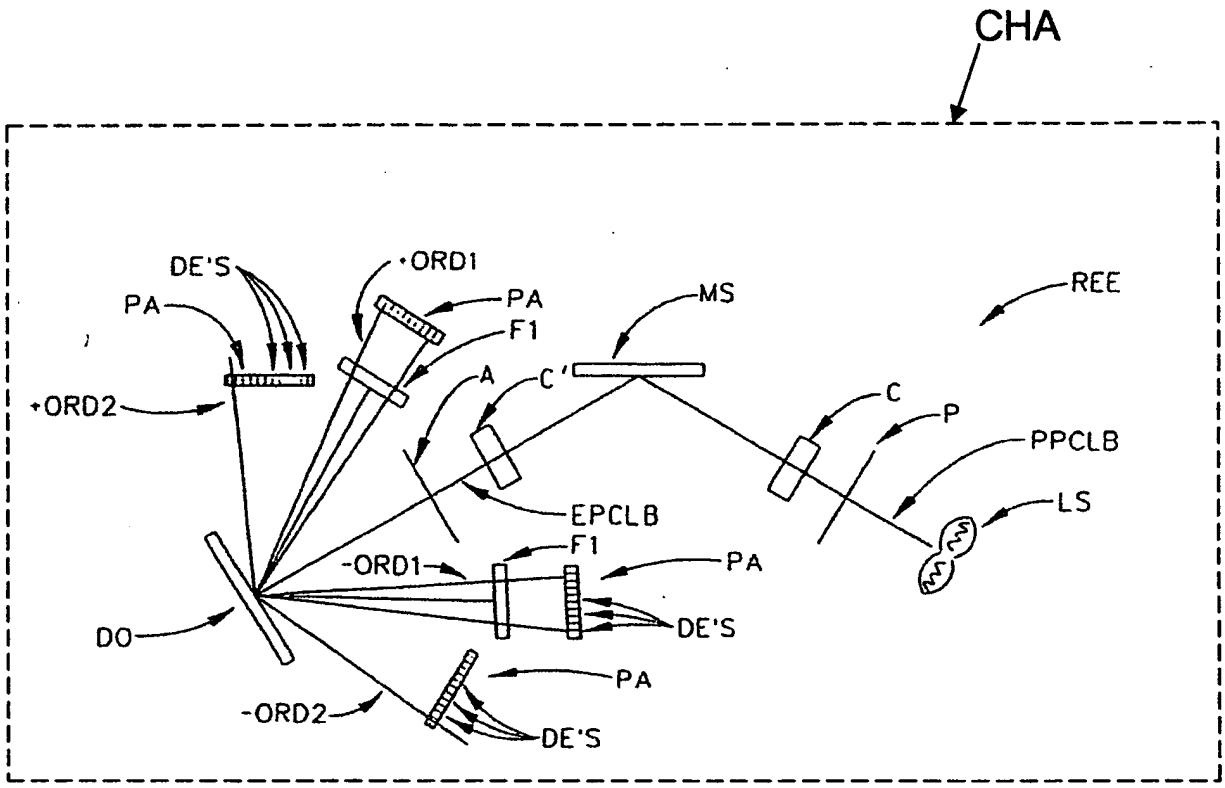

CHA
DE'S
PA
+ORD2
+ORD1
PA
F1
A
C'
MS
REE
C
P
PPCLB
LS
EPCLB
F1
-ORD1
PA
DO
DE'S
PA
-ORD2
DE'S

FIG 5a

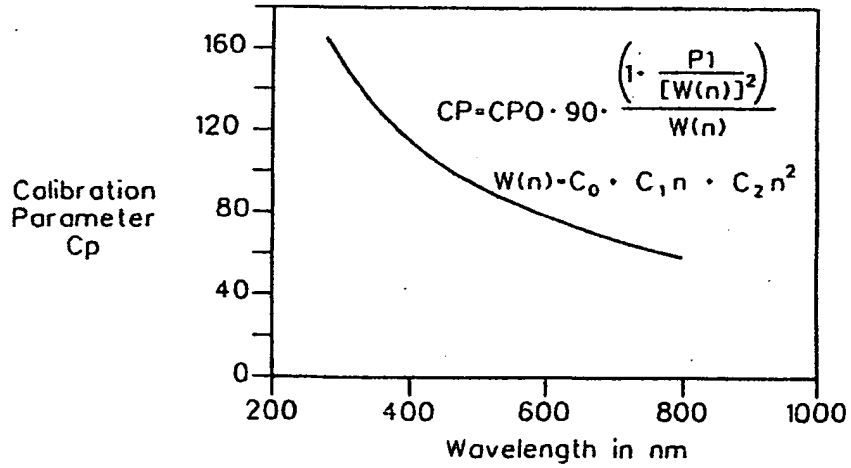

Calibration Parameter Cp
160
120
80
40
0
200
400
600
800
1000
Wavelength in nm
$CP=CPO\cdot 90\cdot \frac{\left(1\cdot \frac{P1}{[W(n)]^2}\right)}{W(n)}$
$W(n)=C_0\cdot C_1 n\cdot C_2 n^2$

FIG. 6

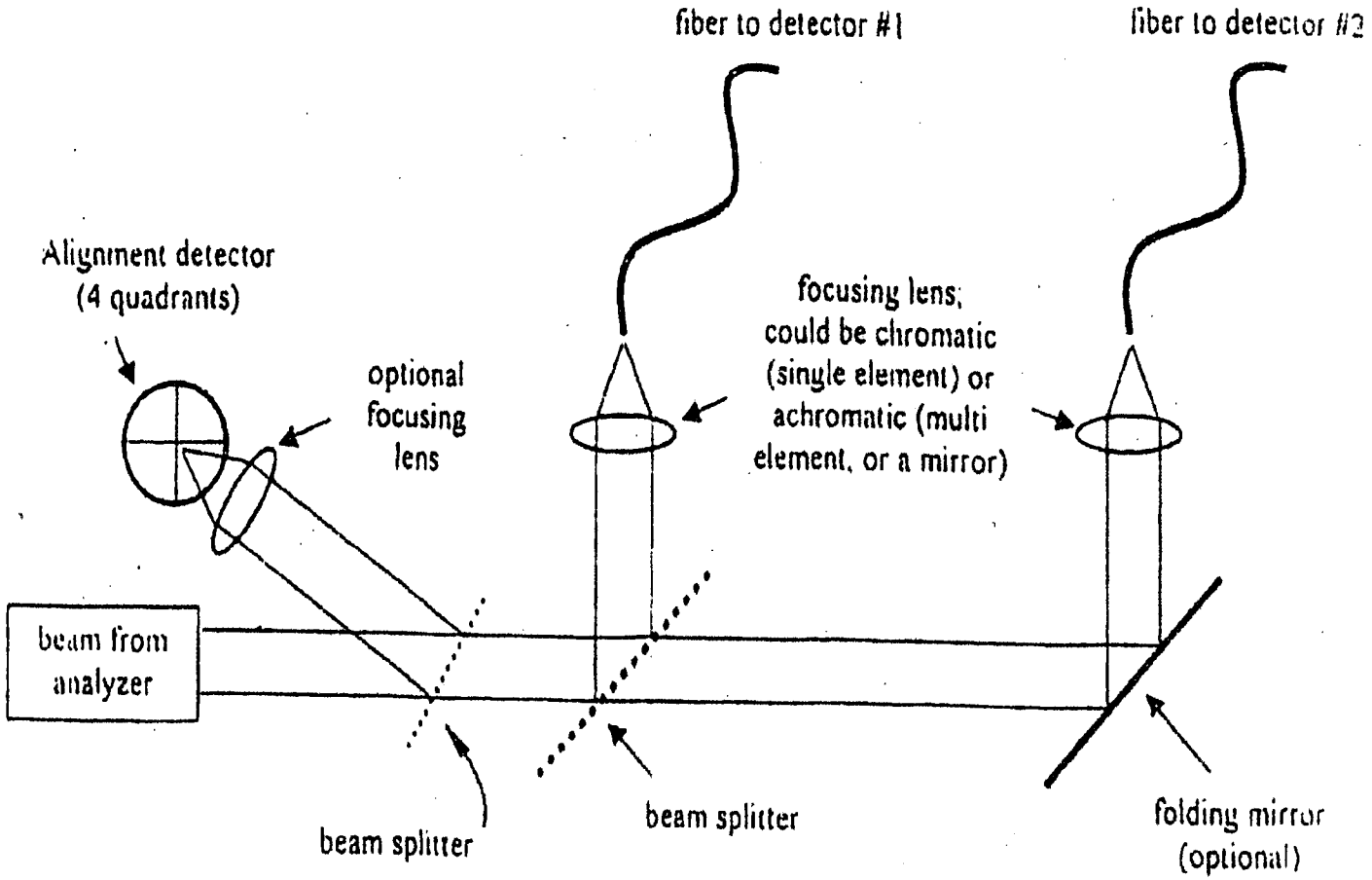

fiber to detector #1
fiber to detector #2
Alignment detector
(4 quadrants)
optional
focusing
lens
focusing lens;
could be chromatic
(single element) or
achromatic (multi
element, or a mirror)
beam from
analyzer
beam splitter
beam splitter
folding mirror
(optional)

FIG 5b

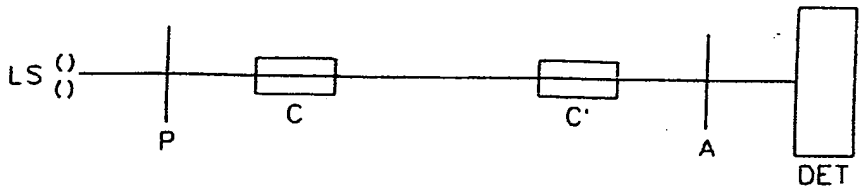


FIG. 7

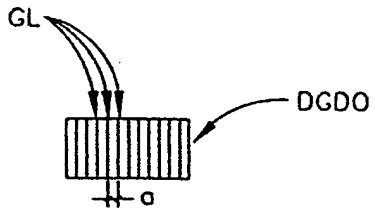


FIG. 8a

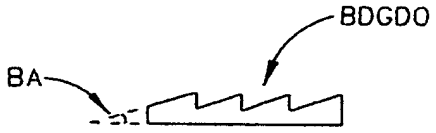


FIG. 8b

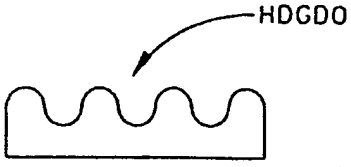


FIG. 8c

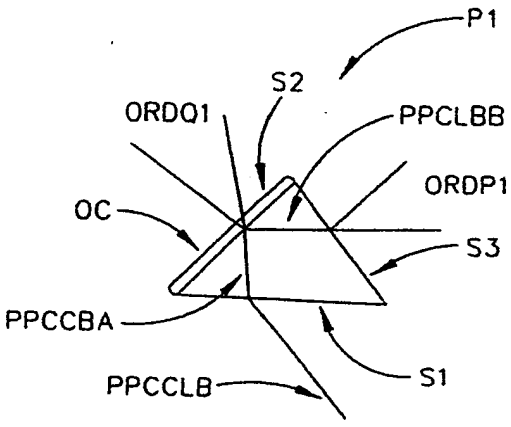


FIG.8d

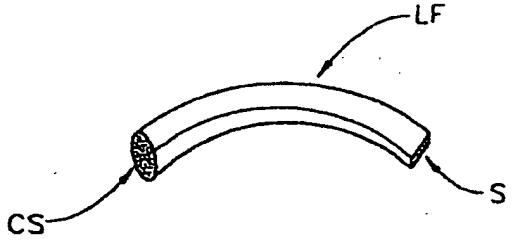


FIG. 9a

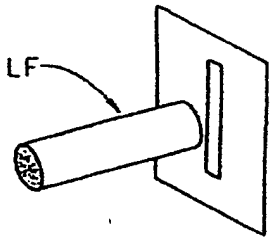


FIG. 9b

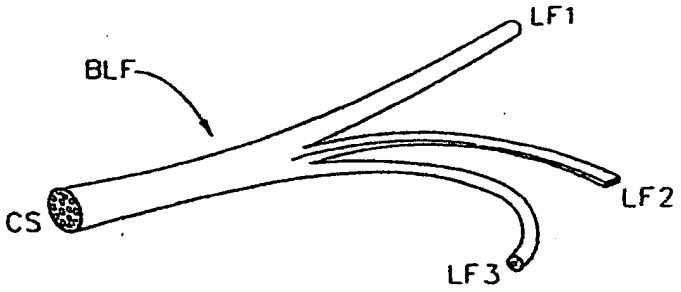


FIG. 9c

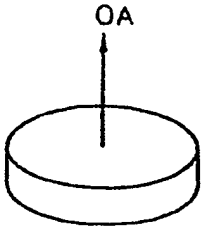


FIG. 9d

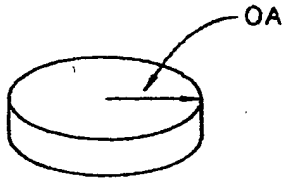


FIG. 9e

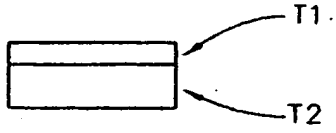


FIG 9f

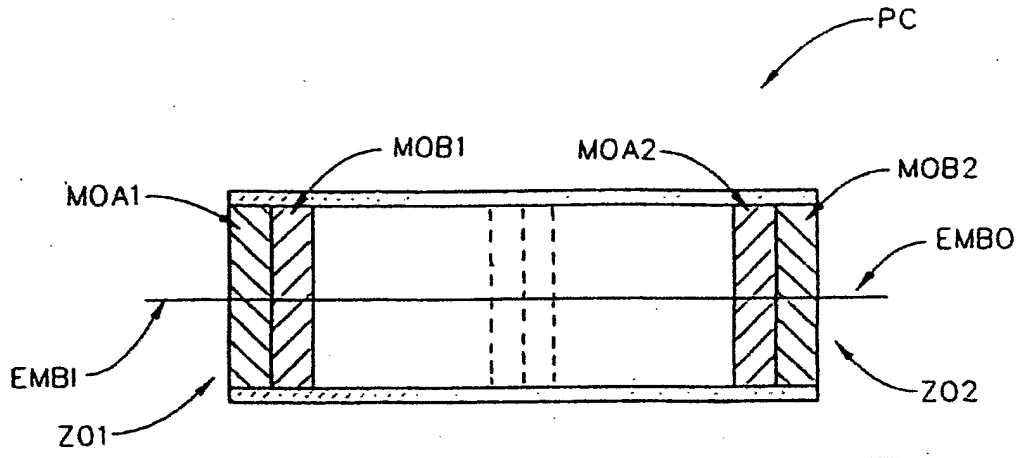


FIG. $9g_1$

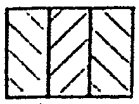


FIG. $9g_2$

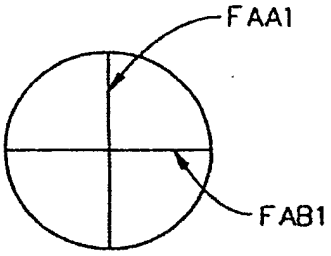


FIG. 9h

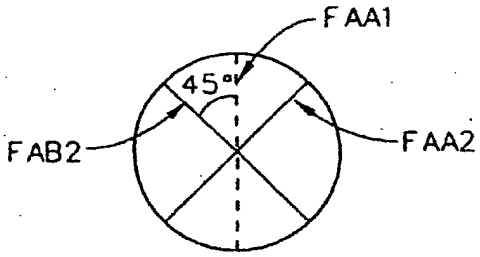


FIG. 9i

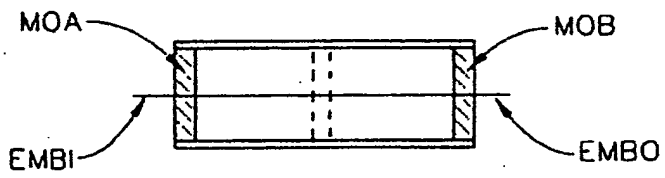


FIG. 9j

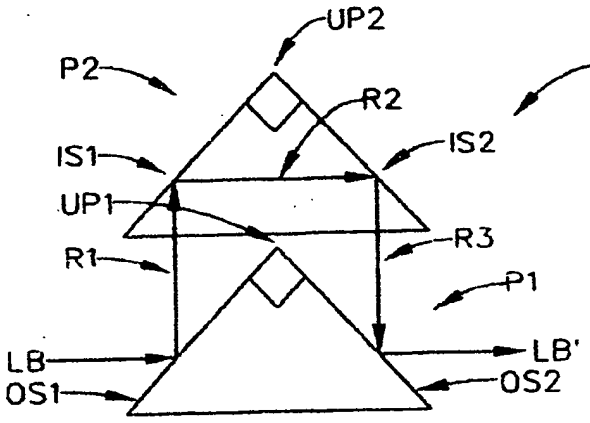


FIG. 9k1

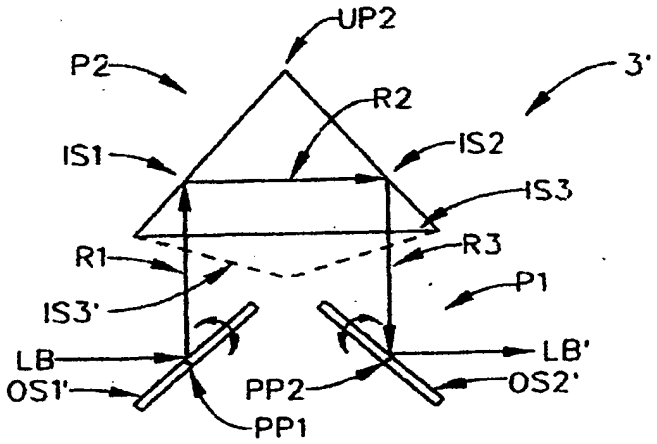


FIG. 9k2

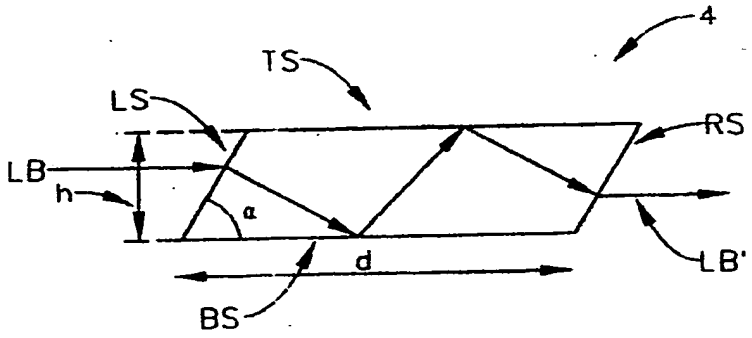


FIG. 9l

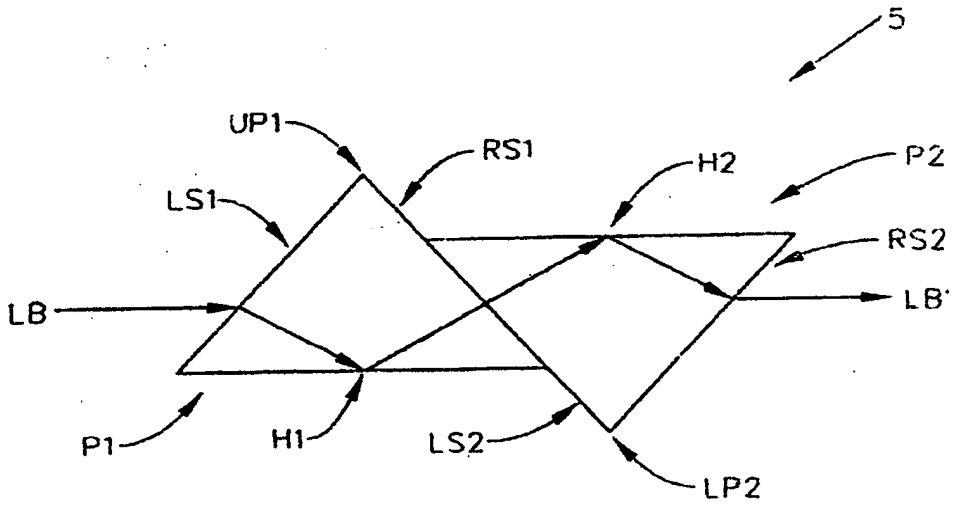

5
UP1
RS1
H2
P2
LS1
RS2
LB
LB'
P1
H1
LS2
LP2

FIG. 9m

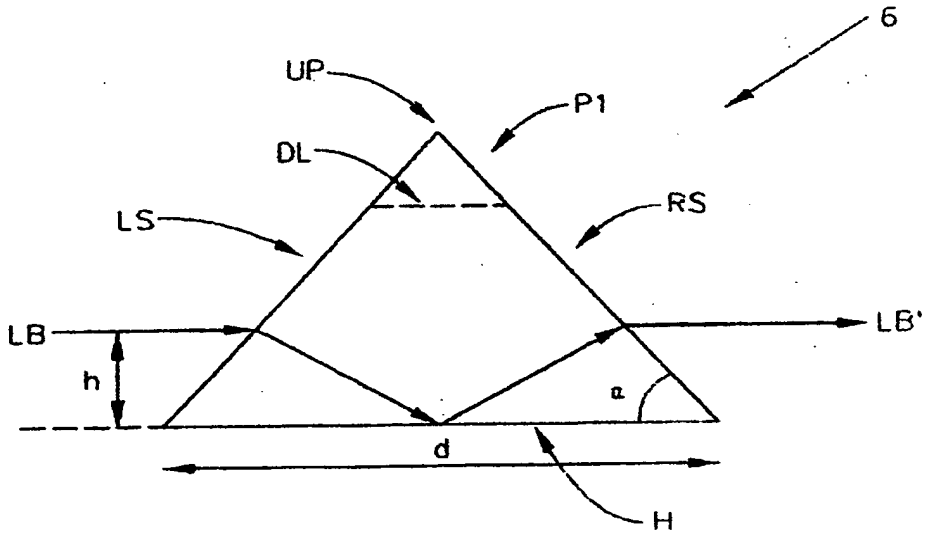

6
UP
P1
DL
RS
LS
LB
LB'
h
α
d
H

FIG. 9n

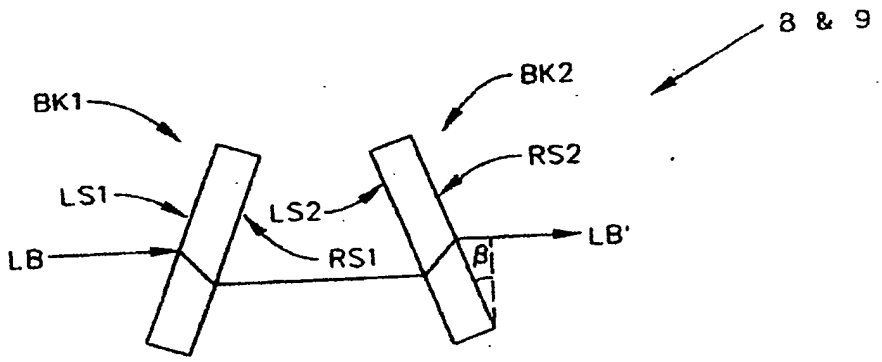


FIG. 9o1

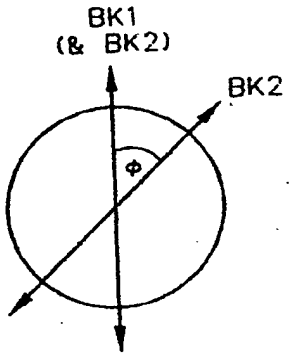


FIG. 9o2

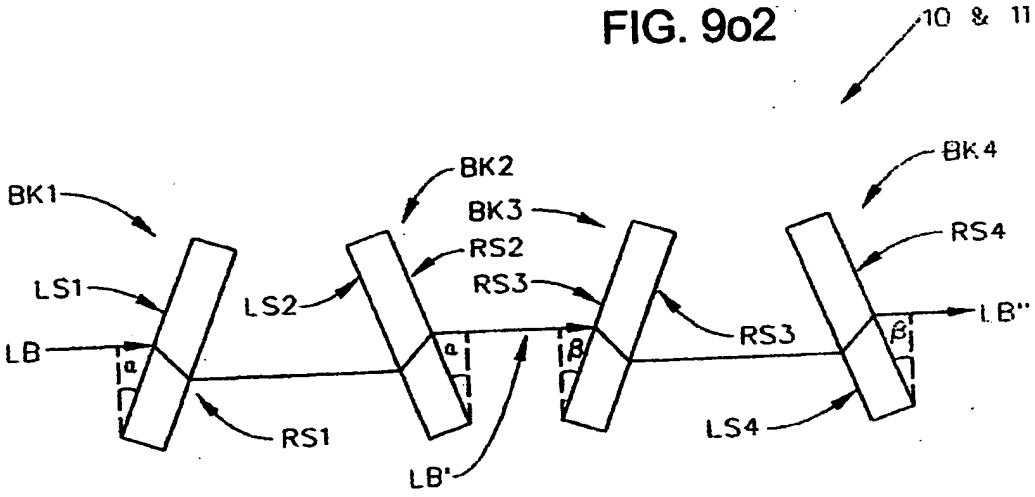


FIG. 9p1

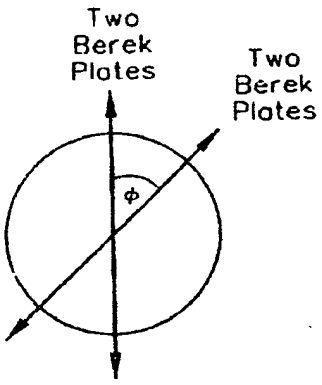


FIG. 9p2

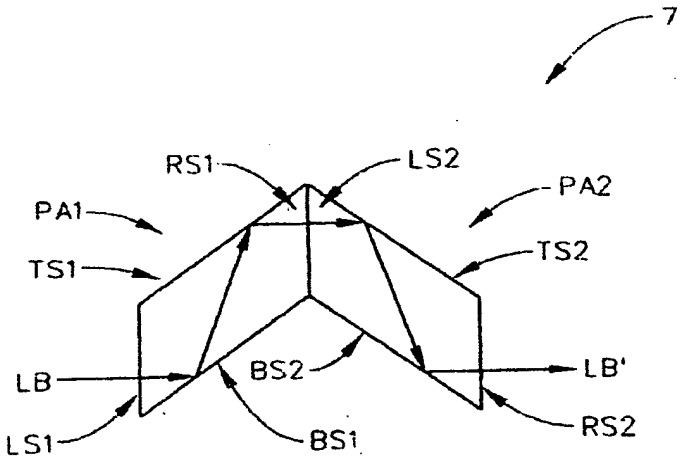


FIG. 9q

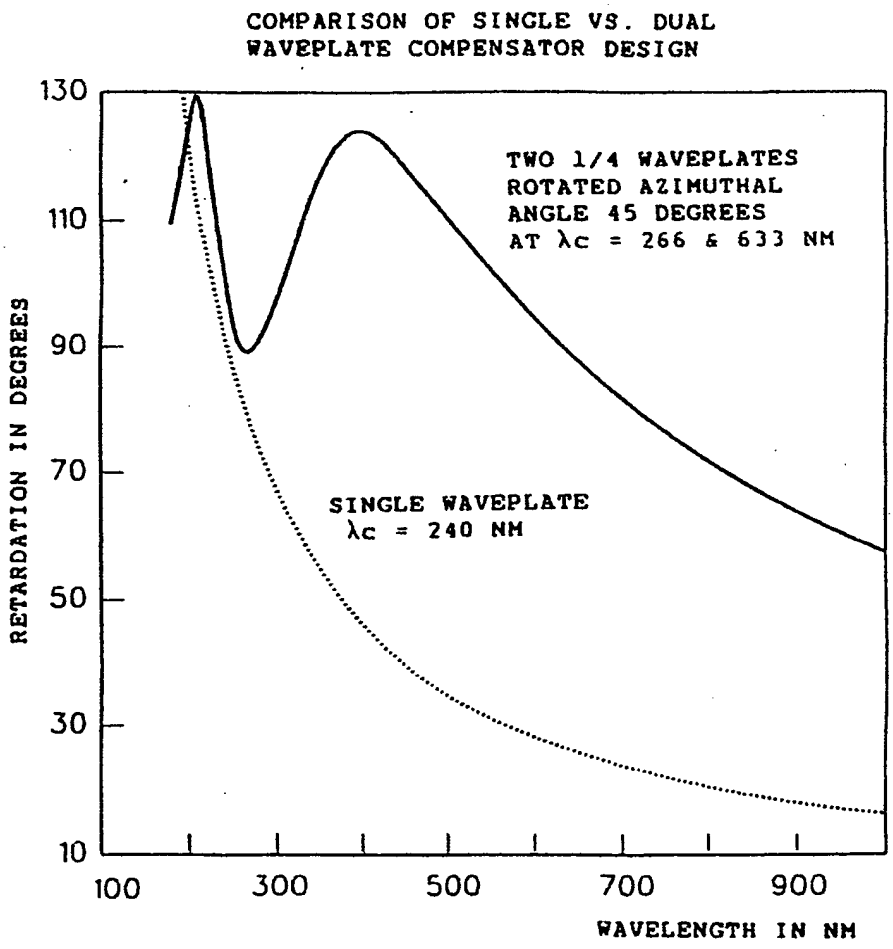

COMPARISON OF SINGLE VS. DUAL
WAVEPLATE COMPENSATOR DESIGN
130
110
90
70
50
30
10
RETARDATION IN DEGREES
TWO 1/4 WAVEPLATES
ROTATED AZIMUTHAL
ANGLE 45 DEGREES
AT λc = 266 & 633 NM
SINGLE WAVEPLATE
λc = 240 NM
100
300
500
700
900
WAVELENGTH IN NM

FIG. 10a

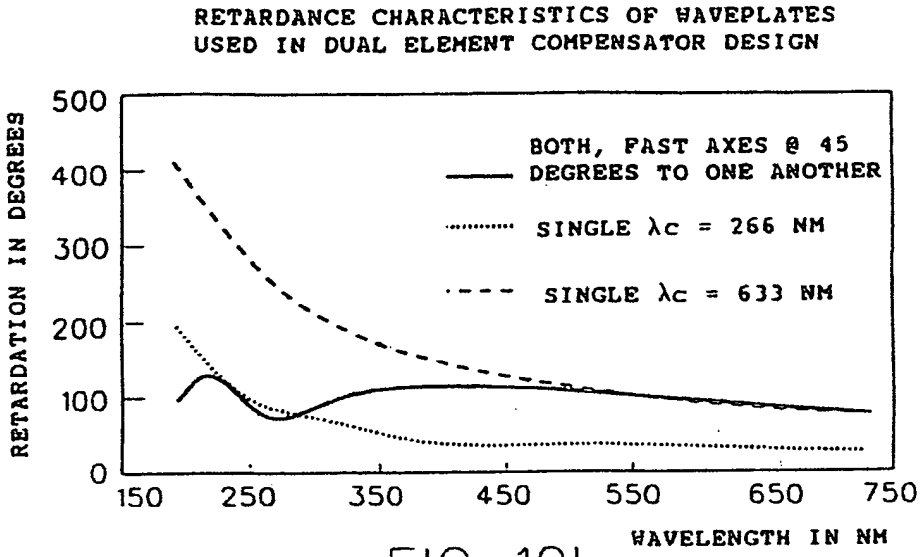


FIG. 10b

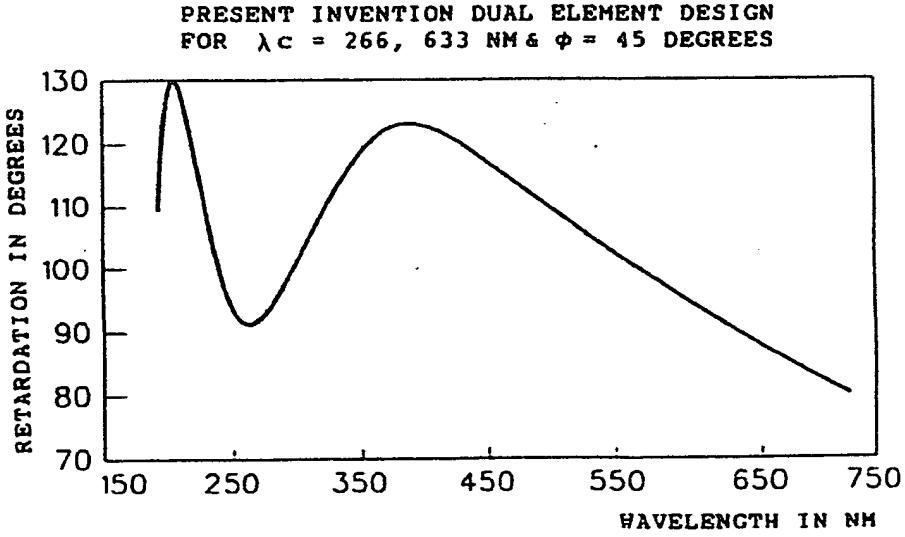


FIG. 10c

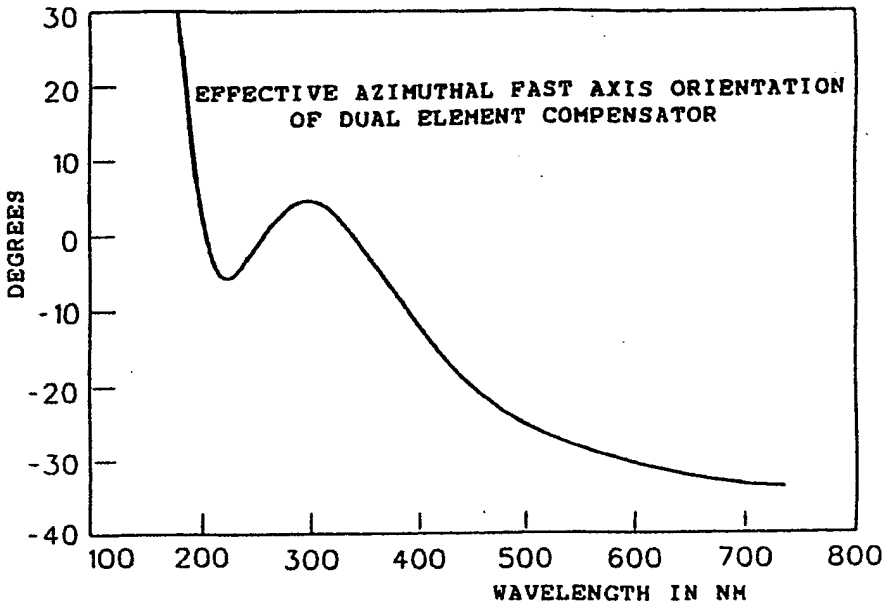


FIG. 10d

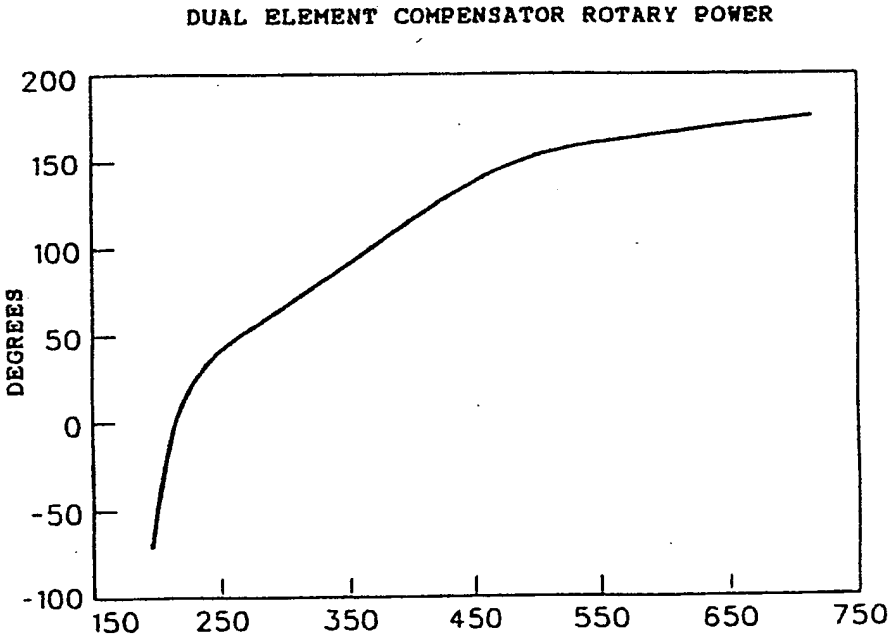


FIG. 10e

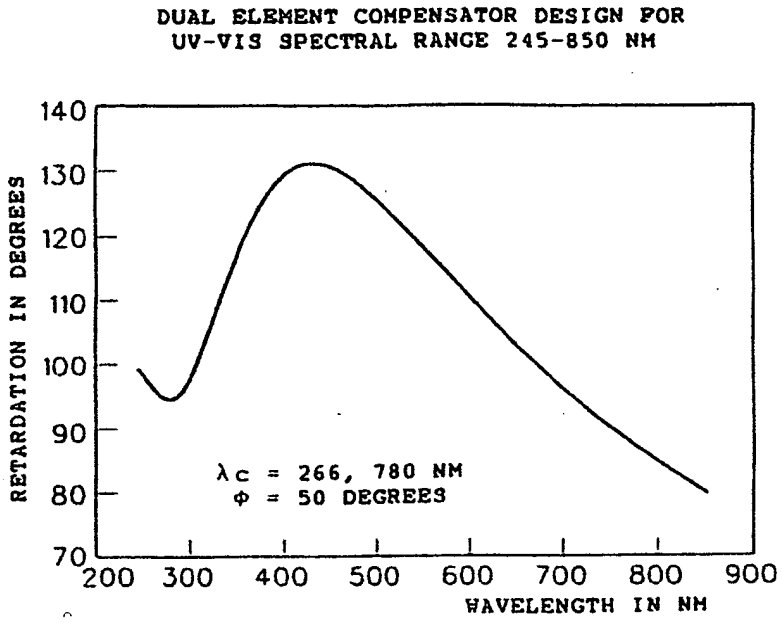


FIG. 10f

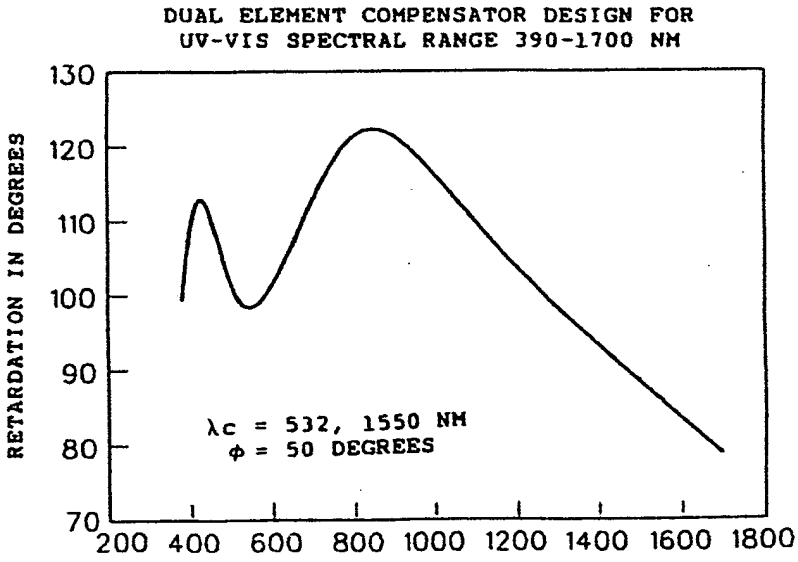


FIG. $10g_1$

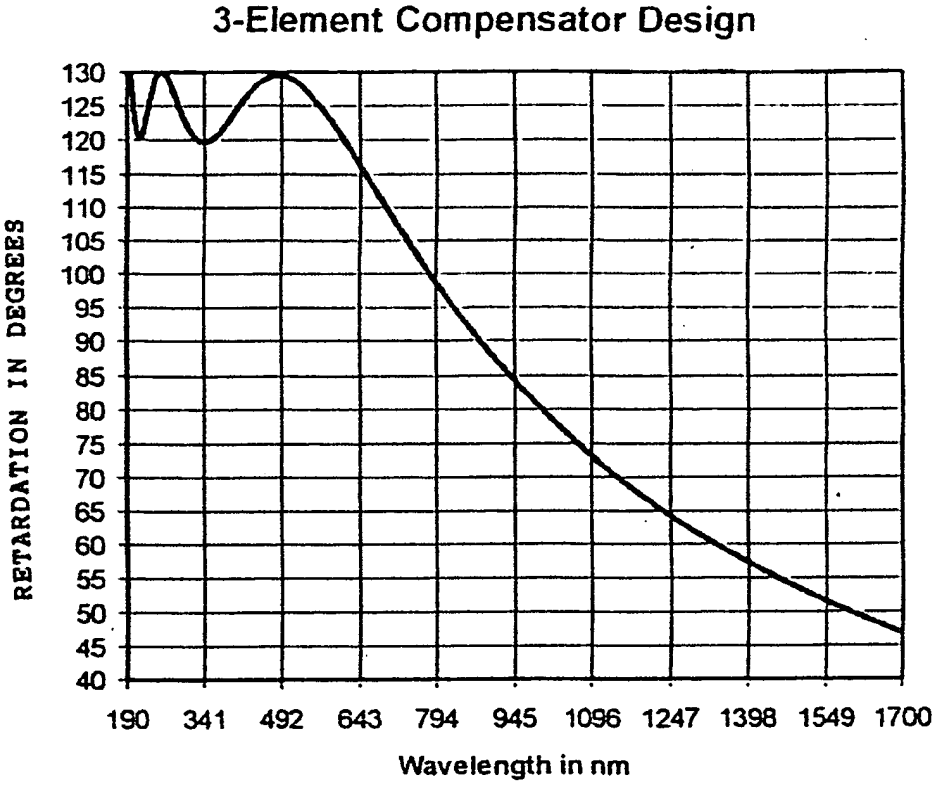

3-Element Compensator Design
RETARDATION IN DEGREES
130
125
120
115
110
105
100
95
90
85
80
75
70
65
60
55
50
45
40
190
341
492
643
794
945
1096
1247
1398
1549
1700
Wavelength in nm

FIG. 10g 2

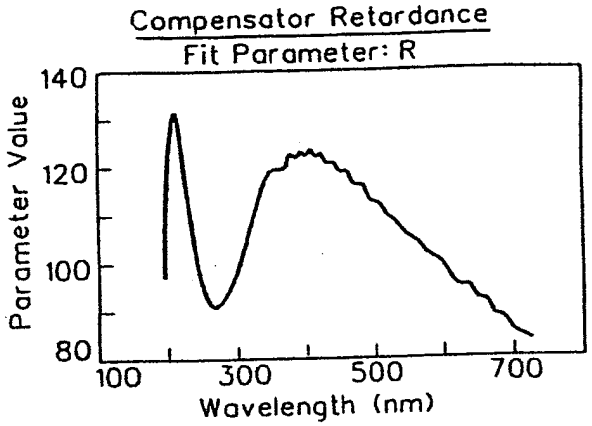


FIG. 10h

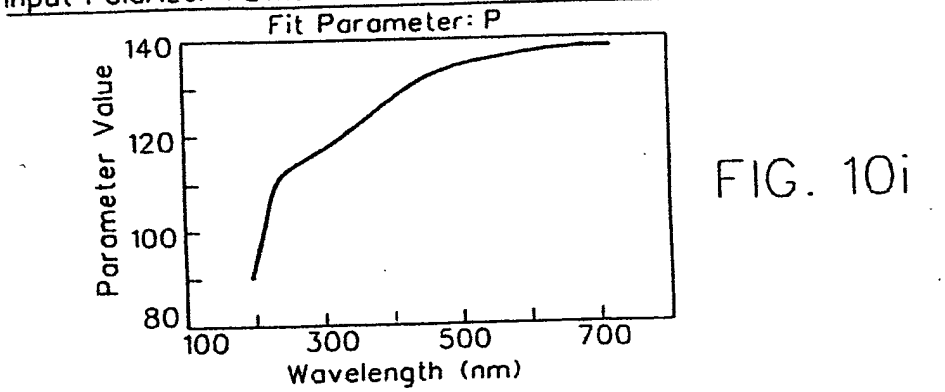


FIG. 10i

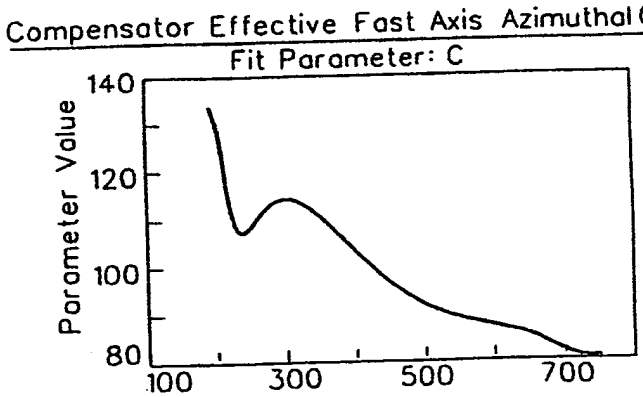


FIG. 10j

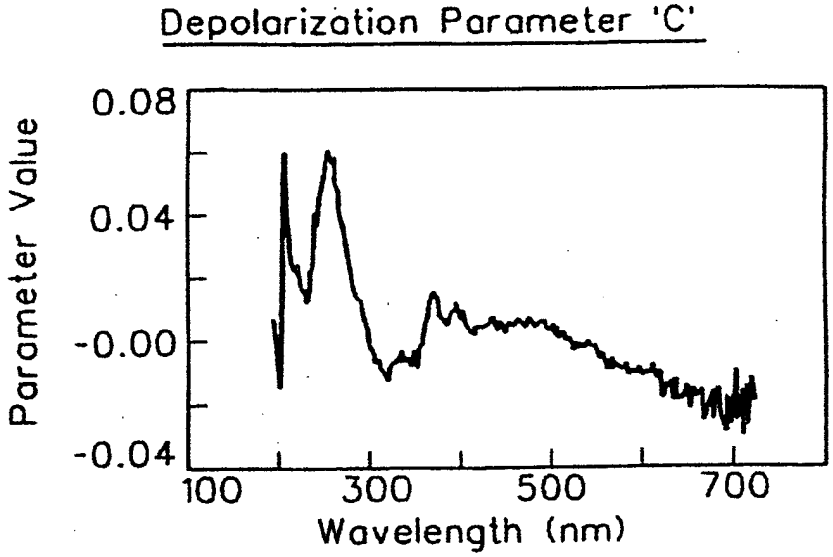


FIG. 10k

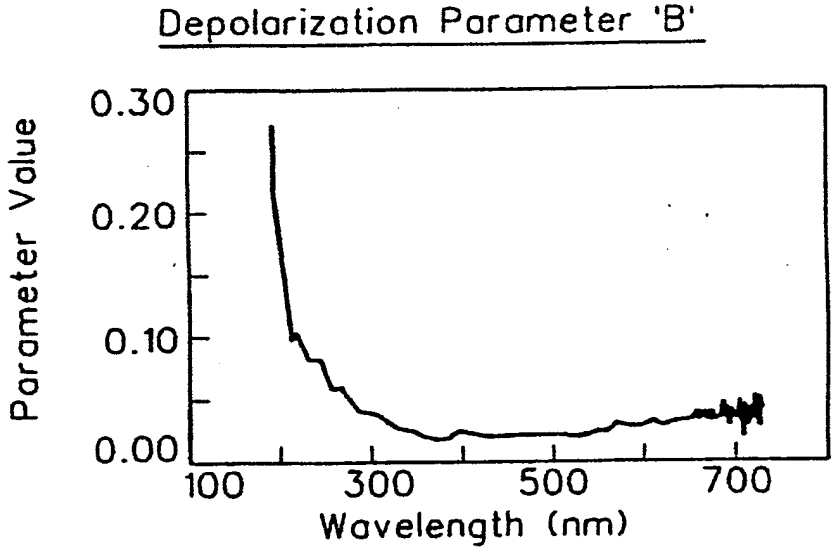
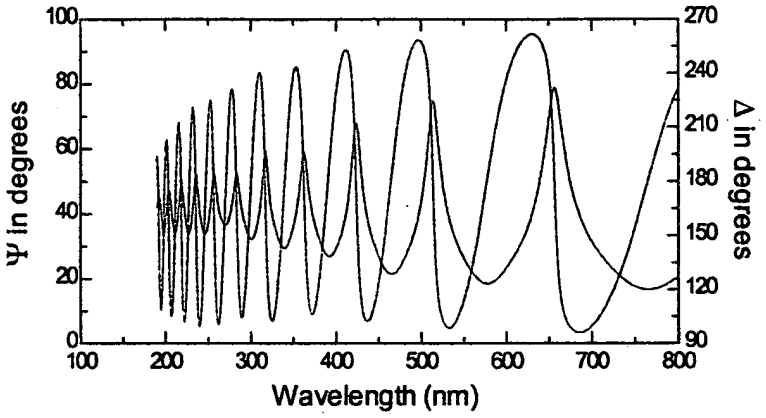


FIG. 10l

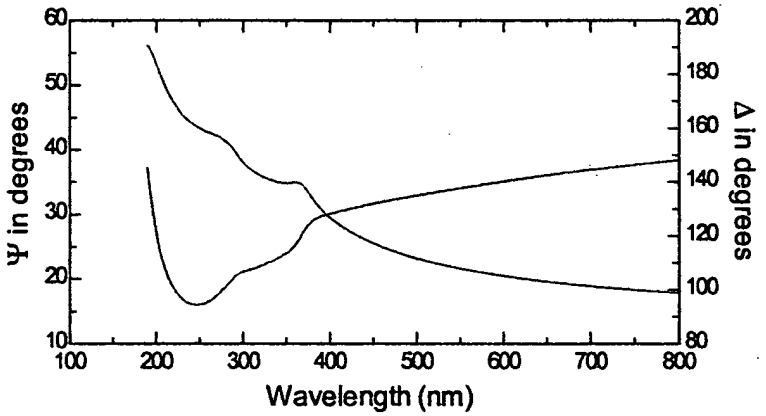
1μm Thick SiO_2 Film on Si
Generated and Experimental



Model Fit
Exp Ψ E65°
Model Fit
Exp Δ E65°

FIG. 10m

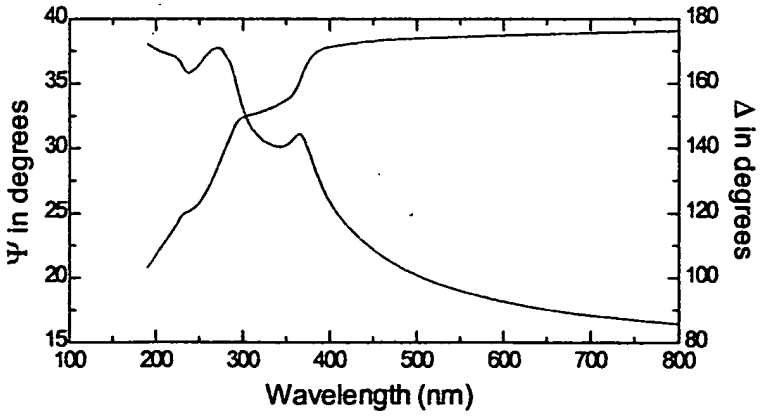
250Å Thick SiO_2 Film on Si
Generated and Experimental



Model Fit
Exp Ψ E65.2°
Model Fit
Exp Δ E65.2°

FIG. 10n

Native (25Å) SiO_2 Film on Si
Generated and Experimental



Model Fit
Exp Ψ E65.1°
Model Fit
Exp Δ E65.1°

FIG. 10o

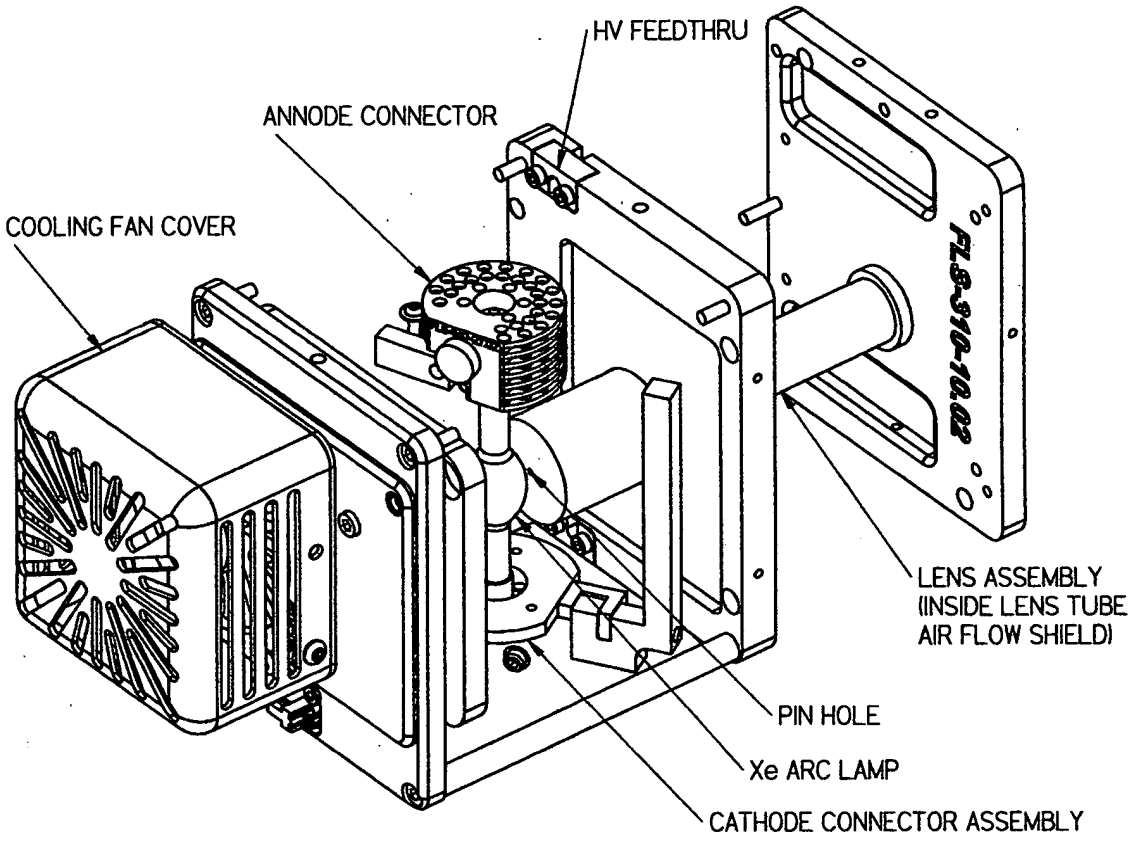


FIG. 11a

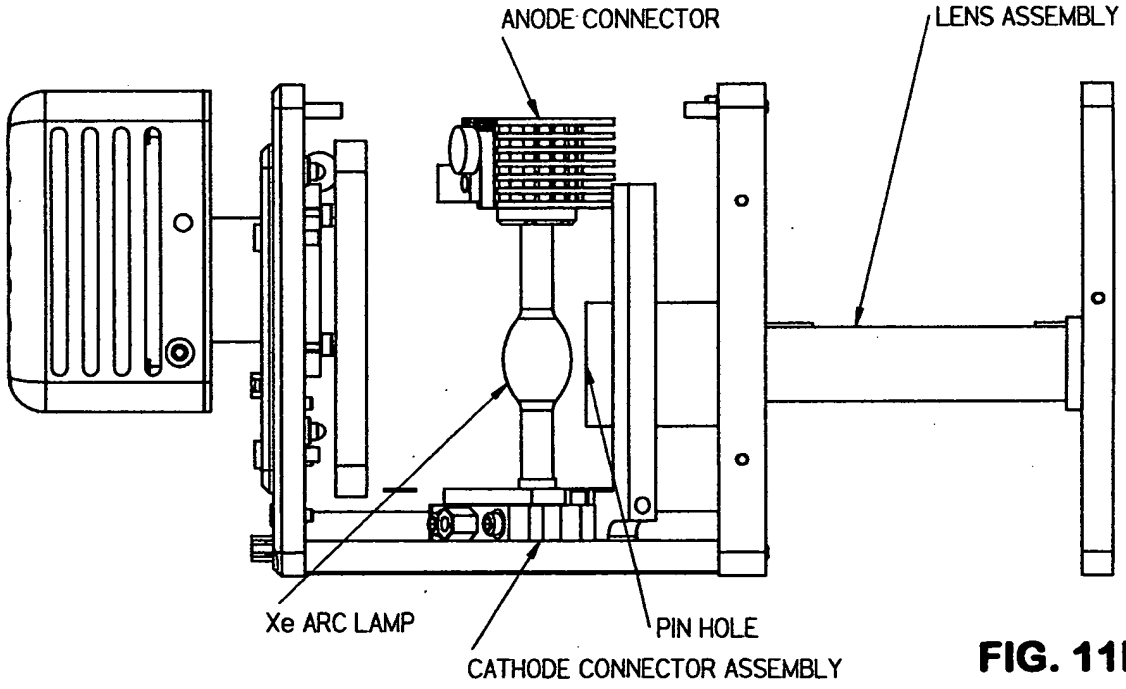


FIG. 11b

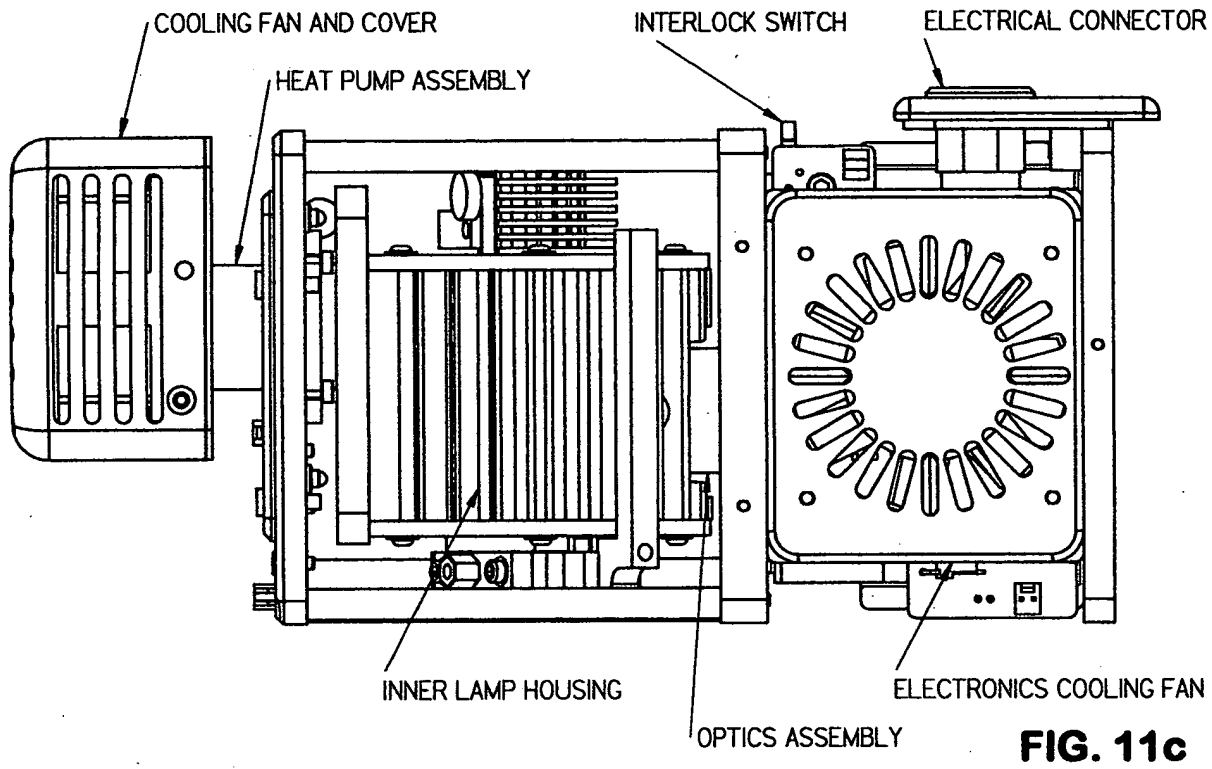


FIG. 11c

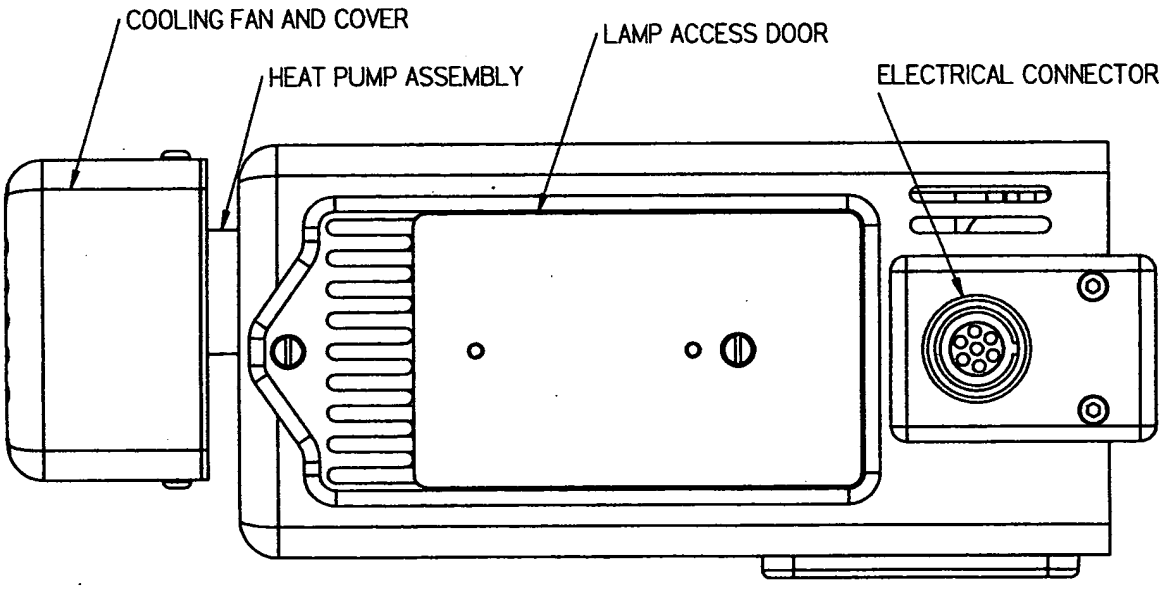


FIG. 11d

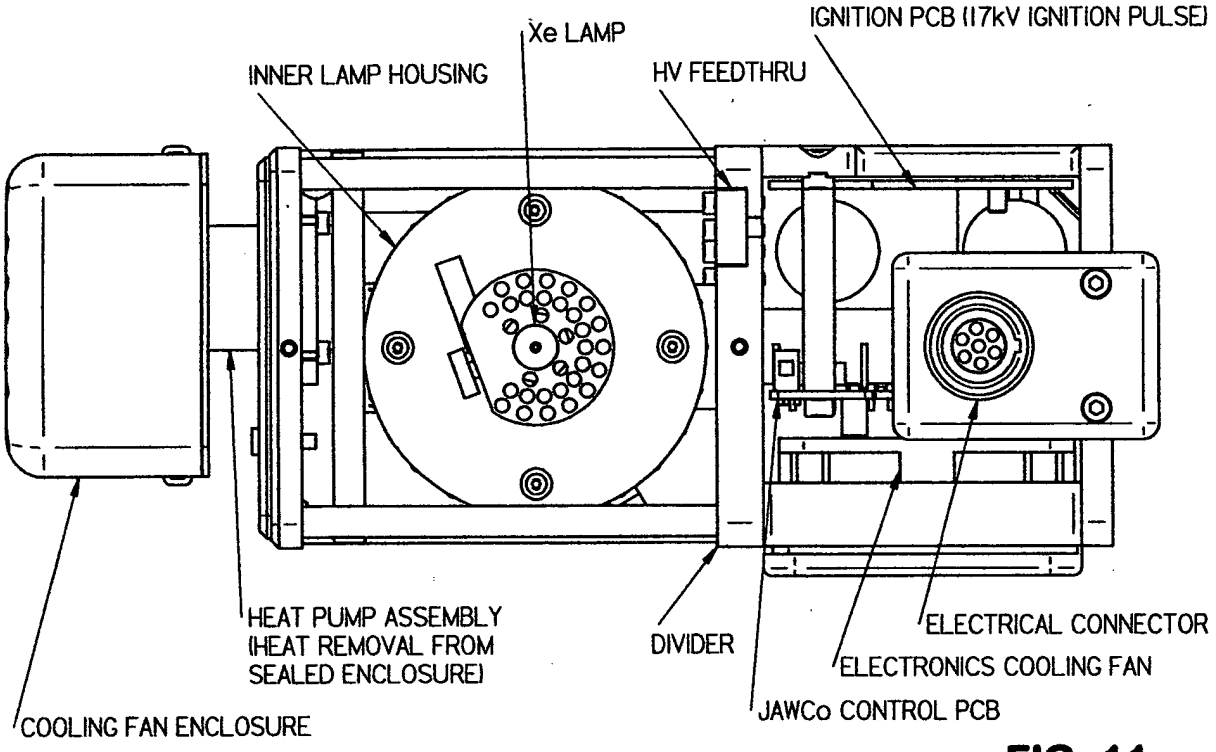


FIG. 11e

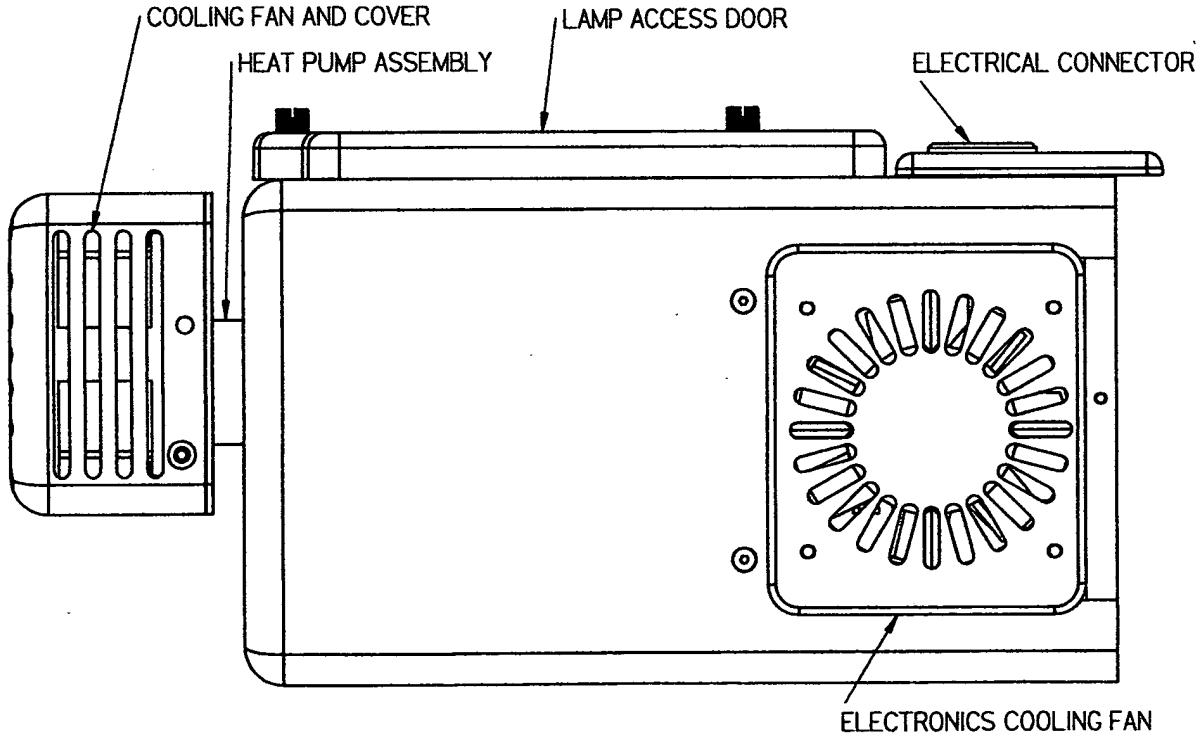


FIG. 11f